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# Spawning and Rearing Habitat Assessment of Williston Reservoir Tributaries

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The Peace/Williston Fish & Wildlife Compensation Program is a cooperative venture of BC Hydro and the provincial fish and wildlife management agencies, supported by funding from BC Hydro. The Program was established to enhance and protect fish and wildlife resources affected by the construction of the W.A.C. Bennett and Peace Canyon dams on the Peace River, and the subsequent creation of the Williston and Dinosaur Reservoirs.

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INTRODUCTION

The Habitat Assessment Section of the Recreational Fisheries Branch, Ministry of Environment made several videotape recordings, by helicopter, of major tributaries of Williston Reservoir in August, 1988. The following tabular summaries of spawning and rearing habitat assessment of the tributaries were made using those videotapes. No ground samples or fish collections were taken. Fish distribution information was derived from earlier Ministry of Environment biophysical stream surveys (1977, 1978 and 1981) and from a 1975 study by Bruce and Starr (1985, see Reference A).

1:50,000 NTS base map sheets were used to record reach breaks, fish species presence and important stream features using the DFO/MOE mapping system. These tables are an alphabetical listing of the tables developed to be used with the biophysical map sheets. Reaches with exceptionally good rearing and spawning habitat have been indicated with an asterisk(*).

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| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| Akie River | | | |
| R1 | large braided river with two main channels, turbid water, but smaller side channels clear, very wide floodplain, unconfined, large debris accumulations on bars, several unstable banks | very limited - possible in side channels but turbidity and abundant fines may be a problem | low in main channel, but side channels could provide better cover |
| R2 | braided river with one main channel, high lateral channel movement and bank instability, high turbidity in main channel,fines dumped in from unstable banks on old terrace | low potential - gravel is appropriate size in places but water is highly turbid | low to moderate - water is clearer in side channels but other cover is low |
| R3 | largely one main channel with a few side channels, meandering areas of high lateral movement (with many side channels and bars) alternate with short straight confined runs, high turbidity except in side channels, some limited beaver activity | limited possibilities in side channels, high turbidity may cause problems | low to moderate - side channels provide main rearing habitat |
| R4 | single main channel and often one side channel, few bars, confined, low debris, some riffle, no terraces | limited in main channel, right trib, has good spawning gravel and clear water (but high bank failure) | low to moderate - boulder and debris accumulations provide cover in main channel, good long side channels, some with veg. overhang |
| R5 | one slightly meandering main channel and often several side channels, many bars, braiding, relic channels | low - limited spawning in side channels, but turbidity is high, clear tributaries could be used | moderate - side channels provide good rearing habitat with overhang veg. cover, L.O.D. and less turbid water, some beaver dams on side channels, clear tribs, could provide good habitat at lower ends |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R6 | single sinuous channel, few bars, riffle, one valley wall failure | unlikely - few side channels | low - few side channels and low cover in main channel (boulders) |
| R7 | meandering main channel with few to several side channels, abundant bars, many relic channels, recent burn on right slope | moderate - several tribs. have excellent spawning habitat (near the mouth) with good gravel and very clear water, side channels could also provide some spawning habitat | good - numerous side channels with less turbid water, bank veg., L.O.D. and undercut banks provide cover, larger tribs. have deep pools for holding, beaver activity on side channels and tribs. |
| R8 | single channel, one entrenched canyon section, broken flow, very turbid, very few side channels, larges, bedrock in banks and occasionally substrate | very unlikely, though possibly in a rare side channel | low - very little cover, (boulders), few side channels |
| R9 | confined, broken, bedrock in substrate and walls, very turbid, small cascades not a barrier | nil | very low - very little cover (boulders) |
| R10 | clear, tumbling cascades over big boulders, steep gradient | nil (small patch of good gravel at confluence with upper trib. but probably not used) | nil - high velocity and no cover |
| | Unnamed Tributary to Akie River (#1) | | |
| R1 | multiple, braided channel, bars, pools and islands | low to moderate - in side channels | low to moderate - side channels provide cover (overhang veg.) |
| R2 | confined and entrenched in a canyon zone, riffle, no bars or side channels, some valley wall failures | nil | low - cover limited to boulders |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R3 | 2 main channels in the side channels, debris on bars | low to moderate (possibly, guessing at substrate size) | low to moderate - rearing in side channels |
| R4 | single channel with few side channels, riffle, boulders, one confined section, large alluvial fans from small tribs. (high bedload) | unlikely - in side channels only, substrate too large in main channel | low - side channels provide limited cover, cover in main channel limited to boulders |
| R5 | one main channel, few to moderate side channels, some old terraces | low - limited if at all to side channels | low to moderate in side channels, boulder cover in main channel |
| | Bernard Creek | | |
| R1 | single channel, broken/ tumbling flow, large boulders/ cobbles, small cascades, shallow, confined valley, few side channels | nil (Ref. A caught spent GR but was probably in present draw-down zone) | low - boulder cover only, shallow riffle |
| | Blackwater Creek | | |
| R1 | irregular/tortuous meanders, single channel, sometimes several channels, unstable banks, very high debris, placid/swirling water, pools, tannic colour | limited to small gravel patches | *excellent - abundant cover with high debris, pools, extensive veg. overhang |
| R2 | tortuous meanders, veg. overhang but little crown cover, flows through wetland meadows, many side channels, some small beaver dams, often broken, small ponds connected to creek | nil [Ref. A caught spent GR and ripe and spent RB in R2/R3, suggested tribs. provide RB spawning habitat (caught spent and ripe RB on tribs.) and possibly GR and MW spawning habitat] | *excellent - abundant cover, many deep holding areas, some beaver activity (may be old) |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R3 | slough with very little flow, through shrub/grass wetland, upstream of lower reach break channel is very wide, then narrows to 3 m and divides into several channels | nil (Ref. A caught spent RB in R2/R3, suggested that DV, RB, GR and MW probably spawn in R3) | *very good - abundant cover in deep water, overhang veg. and possibly undercut banks |
| Carbon Creek | | | |
| R1 | wide valley flat, high energy river, abundant flood sign, bars, side channels, old relic channels and benches, boulders, 50% bars with some veg., slight meander | nil [Ref. A reported GR, LSU, RB (local reports) spawn here, high spawning potential] | low cover, boulders and rare pools (bedrock controlled) |
| R2 | straight narrow channel constricted between rock shelves, small cascades but no barriers | nil | nice deep pools |
| R3 | meandering shallow riffle, pools on bends, 50% bars, logged on right slope | nil | deep bedrock controlled pools on bends |
| R4 | single straight channel, few bars, placid deep pools, some fines | nil | *good rearing - good cover, deep pools, overhang veg. and undercut banks |
| R5 | meandering, nice deep pools and runs, gravels/fines, channel splits occasionally from L.O.D. accumulations, failing banks contribute L.O.D., beaver swamps adjacent to creek | *excellent spawning gravel | *very good rearing - nice deep pools, high L.O.D., undercut banks, many trees falling into creek with root wads, provide good stable cover |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R6 | confined, straight, single channel, a few small cascades, riffle, short canyon in entrenched section | nil - substrate too large | low to moderate - some large pools controlled by bank bedrock and large boulders |
| Chowika Creek | | | |
| R1 | sinuous channel, broken/ rolling riffle, two confined canyons with small cascades and some pools, (2R2 may be a barrier), very few bars, no side channels, boulder/cobble | nil [Ref. A observed spawning GR and DV in R0 (now in drawdown section) and caught spent GR and DV in this reach (R1), they imply this reach provides ample spawning habitat, and state that this river is important for spawning DV] | low - limited cover, occasional small clumps of debris from failing banks, boulders, pools in some short bedrock controlled sections |
| R2 | wider channel, lower gradient, no cascades | nil (or very, very limited) | low - little cover, shallow riffle, some overhang veg. and a few boulders |
| R3 | meandering main channel with short straight entrenched sections, moderate bars and side channels, some failing banks and large debris accumulations, beaver ponds on some side channels | *excellent spawning gravel at top end of reach | *very good habitat - side channels, nice deep pools on meander bends with overhang veg. and possibly undercut banks, L.O.D. accumulations, short confined sections provide less cover |
| R4 | entrenched canyon sections alternating with open meanders, some cascades and bars, broken flow, several large debris accumulations and failing banks, one large avulsion | very low to moderate - wide, meandering section has some spawning gravel | moderate to good in meanders, several side channels, high L.O.D. |
| R5 | single channel, broken flow, small cascades, confined/ entrenched | nil | very limited - very little cover (boulders) |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| Clearwater Creek | | | |
| R1 | meandering, largely riffle, some deep pools, several large bars, many side and abandoned channels, some failing banks dumping fines in, some clearcut slopes | nil (Ref. A reported high spawning and rearing potential for most sportfish in this reach, caught spent LSU) | cover limited to boulders and occasional bedrock controlled pools, shallow water |
| R2 | single straight channel, run/ riffle, few bars, bedrock in banks and substrate, few pools | unlikely (60% boulders/cobbles) unless small isolated patches in side channels/bars | cover limited to boulders and veg. overhang, low L.O.D. and pools |
| R3 | nice meandering stream, clear water, high side channels, riffle/pool | *excellent spawning gravel and good cover | *very good - many side and back channels and overhang veg., small stable debris accumulations (with root wads) create pools, stable banks, some major debris acc. on bars |
| R4 | increased gradient, larger substrate, meandering, point bars and side channels, mainly riffle | unlikely, very limited (to side channels and bars, for big fish) (Ref. B reported excellent spawning gravel, probably used by DV) | moderate - several side channels, some veg. overhang, a few boulders and L.O.D. for cover |
| R5 | single channel, riffle/run, boulders/cobbles, short bedrock canyon, no side channels, few bars | nil | limited cover, boulders, no pools, possibly undercut banks and veg. cover |
| R6 | shallow gradient, tortuous meanders, some bank failure contributing L.O.D., old logging/burn area | *very good spawning gravel | *good rearing - high cover, stable L.O.D. with rood wads create deep pools, flood and side channels, veg. overhang |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R7 | more confined, straight single channel with 2 entrenched canyons, unstable valleys walls depositing L.O.D., mainly riffle, no bars | nil | limited -riffle area, only boulder cover and patchy veg. overhang |
| R8 | very small channel (3 m), old burn, high L.O.D. from fire, brush overhang but no tree cover, wetland near lake | very limited | limited - wetland has good rearing and holding areas, L.O.D. and veg. overhang provide some cover |
| Collins Creek | | | |
| R1 | bay at the mouth used as log storage dump, single channel, abundant debris, unstable banks, heavy timber | low to moderate (Ref. A collected spent GR and ripe and spent LSU in R1,, stated that Collins C. is important to spawning DV) | *good - high L.O.D., veg. overhang, undercut banks, occasional pools |
| R2 | irregular meander, nice habitat, bars, side channels, unstable banks, high debris but no large accumulations | moderate - appears to have good patches of fines/gravels for spawning | *very good - abundant cover, side channels, overhang veg., many L.O.D. controlled pools |
| Cut Thumb Creek | | | |
| R1 | meandering, frequently confined channel, riffle, large substrate | nil (Ref. A collected spent GR and ripe MW) | low - low cover and few holding areas |
| R2 | cascading section with several falls in bedrock canyon (barrier to fish migration) | nil | low - some deep pools between cascades and below falls |
| R3 | meandering, lower gradient channel, gravels, a few failing slopes contribute fine material | *nice spawning gravel with good potential | moderate - some side channels and nice pools, adjacent wetlands with some beaver activity |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| Davis River | | | |
| R1 | single channel riffle, slight meander, confined, large substrate, several failing slopes | nil (Ref. A collected spent LSU in R1) | low - limited cover, few holding areas |
| R2 | single channel, nice mix of rearing and spawning habitat, meandering, bars, deep pools, stable L.O.D. | *good (Ref. A suggested that DV and GR probably spawn in R2, collected spend GR in R2) | *good - nice meanders with deep pools, L.O.D. and undercut banks for cover |
| R3 | tortuous meanders, abundant bars, several small channels, occasional debris accumulations, high channel instability | *good to excellent | *excellent - abundant cover, L.O.D., veg. overhang, pools, undercut banks |
| R4 | short, confined riffle/run, one side channel, few bars, little debris | limited | moderate |
| R5 | tortuous meanders, old abandoned channels, failing banks, some beaver activity, adjacent wetlands | moderate to good? (difficult to determine substrate size) | moderate to good - pools and overhang veg., some side channels and possible connections to adjacent wetlands in abandoned channels |
| R6 | confined/entrenched, single channel, riffle | nil | low - limited cover (boulders) |
| R7 | meanders, high instability failing banks, abundant bars, old cut-offs and oxbows, some short confined riffle sections alternate with meanders | low to moderate (possibly good difficult to determine substrate size) | good - pools, some L.O.D., veg. overhang, side channels |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R8 | one sinuous/meandering channel, few bars and no side channels, short steeper sections | low - probably possible in pockets of gravel | moderate - habitat varies from riffle (boulder cover) to run (undercut banks, veg. cover, low L.O.D.) |
| R9 | upstream of R8 was not surveyed, but from high level flying, appeared to provide good rearing habitat and possibly good spawning habitat (meandering stream, moderate bars, 5-10 valley:channel, pool/riffle/run) | | |
| Ducette Creek | | | |
| R1 | meandering single channel, broken/rolling, failing valley walls depositing fines and L.O.D. into channel, point bars | nil - major falls are barrier at top of reach | limited cover, boulders, shallow water, low L.O.D. |
| Dunlevy Creek | | | |
| R1 | shallow, meandering reach, gravel/cobble, many failing slopes dumping fines and logs into creek, 5R is a fish barrier | possible in some gravelly areas (Ref. A collected ripe RSC in R1, suggested creek used by RB and MW for spawning since high potential) | low cover due to shallow water, a few pools and some boulders, beavers have dammed stream and created ponds and holding areas |
| R2 | wider valley, meandering channel broken by abundant beaver activity, dams across main channels and tribs. create ponds, high bank instability, some lateral channel movement and failing slopes | limited potential | shallow water, but beaver ponds provide rearing habitat for fry and holding areas for adults, dams increase L.O.D. by drowning trees |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| **Eklund Creek** | | | |
| R1 | irregular meander, high bars, clear brown water, several side channels, high failing banks dropping L.O.D. into channel, high lateral channel movement, channel splits frequently | low - patchy gravel, very unstable channel, potential for spawning in side channels (Ref. A reported suitable spawning habitat for RB, GR, and MW) | low to moderate - few pools, moderate cover, L.O.D. provides most of the cover |
| R2 | channel frequently splits and goes through trees, larges, high debris, irregular meander, very unstable channel | very limited | low - low cover, shallow water |
| **Emerslund Creek** | | | |
| R1 | gravel/cobble run through large clearcut area | possible spawning use, large gravel/cobble predominates | low veg. overhang and undercut banks provide strip cover, few boulders and low L.O.D., few pools, some beaver activity on a side channel |
| R2 | meandering run, gravel/cobble, some channel instability, stream changing course and causing debris accumulations | possible in faster straight sections | some debris accumulations and veg. overhang provide limited cover (some cutbanks and pools), back channels provide best rearing habitat |
| **Factor Ross Creek** | | | |
| R1 | single channel, riffle/run, small creek, heavily forested, unstable banks with L.O.D. in creek, some lateral channel movement with multiple channels through forest, high debris at mouth in drawdown could be a barrier | very limited and unlikely | moderate - some sections with small cascades and broken water provide little cover, some debris accumulations, undercut banks and veg. overhang, occasional pools associated with debris accumulations |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R2 | flatter gradient, more gravels, many debris accumulations and unstable banks, heavy timber | low to moderate - some good gravel in localized areas, debris accumulations do not appear to be barriers | good habitat - undercut banks and overhang veg. provide cover, frequent large debris accumulations cause pool and side channel formation, abundant cover |
| **Gaffney Creek** | | | |
| R1 | low gradient, riffle/run, cobbles/gravels, shallow and flat, sinuous/meandering | very low - may be small patches for larger fish | low - limited cover, shallow, very few pools, little L.O.D., low boulder cover only |
| R2 | sinuous run, flatter gradient, fewer larges | low - possible for larger fish in limited patches | low to moderate - low cover, some stretches of run have deeper water, boulder cover |
| **Ingenika River** | | | |
| R1 | placid flow, sinuous/ meandering run, many side channels and bars, failing banks (fines) dumping L.O.D., a few debris accumulations | low - some patches of good spawning gravel available but is limited (Ref. A caught mature LW here, suggesting it utilizes river for spawning, they reported that the Ingenika R has high spawning and rearing potential) | low to moderate - considerable L.O.D. along channel, sweepers provide cover, other cover quite limited, possibly some deep pools |
| R2 | tortuous meanders, many cut-offs and oxbows, (some filled in), many side channels, placid flow, high lateral channel movement, very unstable banks, many bars | some limited spawning gravel may be available | low to moderate - limited cover in side channels, over veg. and deep water |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| Kimta Creek | | | |
| R1 | meandering riffle, failing banks dumping L.O.D., huge debris accumulations causing channel avulsions and large sediment deposits, many channels through trees | very limited - large substrate and periodic dumps of fines from bank erosion | low to moderate - mainly shallow riffle with little cover, but several L.O.D. accumulations provide localized cover |
| Lafferty Creek | | | |
| R1 | large amounts of standing and fallen timber at the mouth, tortuous meanders, shallow water, side channels, moderate bars, some beaver activity | *excellent spawning gravel (Ref. A collected spent GR, CSU and ripe and spent LSU in R1, stated that Lafferty C provides much suitable spawning and rearing habitat and is important to spawning DV) | *good habitat - abundant cover, L.O.D., overhang veg., pools, side channels |
| R2 | confined sinuous channel, low bars, low debris, no side channels | nil | moderate - limited cover, largely riffle, boulders, overhang veg. |
| R3 | tortuous meanders, abundant pools, low gradient, 1-3 main channels, flows through wetland area, destroyed beaver dam | *some good gravel areas alternate with fine dominated patches (Ref. A collected spent DV and ripe MW in R3/R4) | *good rearing - high pools, L.O.D., veg. cover |
| R4 | tortuous meanders through wetland, beaver activity, breached dams, ponds, standing water | unlikely - only occasional gravel patches present (see R3 comment above) | *excellent - abundant holding areas due to beaver activity |
| R5 | tortuous meanders, riffle/run/pool, moderate bars, abundant submerged debris, some beaver activity, some short straight sections between meanders, slightly steeper gradient at top end of reach | *excellent spawning gravel (sometimes in patches) | *excellent rearing habitat - veg. overhang, submerged L.O.D., pools, good cover |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R6 | confined straight channel, steep gradient, continuous cascades (most are 0.5 -1 m high, one 3R3 barrier) | nil | very limited |
| **Lignite Creek** | | | |
| R1 | small volume, meanders through heavy veg. cover, several failing banks, small debris accumulations | very low - possible in localized areas (Ref. A reported spawning habitat in creek available for RB, MW and GR) - good. | moderate to good - abundant cover from debris and veg. overhang develops into nice riffle/run |
| R2 | single channel runs alternate with beaver dams and small ponds | low | nice rearing habitat though cover is low in shallow runs, deep water and veg. overhang are provided by beaver ponds |
| R3 | swampy wetland area created by beaver dams and ponds, slough like, very slow current | nil | good rearing, many holding areas in ponded sections, veg. overhang and undercut banks provide cover, dams don't appear to be barriers although some are overgrown in the upper reach and may become impassable with thick vegetative growth |
| **Lost Cabin Creek** | | | |
| R1 | confined channel, cascades/ broken, 4R at mouth and a 2R further upstream (2R not a barrier) | nil | very limited - all riffle, tumbling/broken, boulder cover only, occasional L.O.D. accumulations |
| R2 | sinuous riffle, broken flow, larges, some failing slopes | nil | limited - little cover, boulders and occasional L.O.D. |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R3 | meandering main channel, high debris, unstable banks, associated wetlands, numeruous bars, island, occasional small channels through forest | *excellent spawning gravel | *excellent - abundant cover, frequent L.O.D. accumulations, pools, high bank instability |
| Manson River | | | |
| R1 | meandering main channel, several small channels, high bank and channel instability, high bars | *nice potential spawning patches near riffles, some areas too fine, high channel instability may be limiting to spawning success (Ref. A captured spent GR, RB and LSU and ripe LSU in R1, reported abundant spawning habitat for all species) | *very good - high debris for cover, many side channels, shallow water |
| R2 | sinuous single channel, rolling/broken, few bars, low debris and few side channels, confined (1R is not a barrier) | very limited, unlikely | moderate - riffle/run, a few pools, low to moderate cover |
| R3 | sinuous channel, nice riffle/ run/pool seq., unstable banks, a few side channels, some short confined sections, a few failing banks, bars | low - too large in most places but probably some gravel available in pockets | moderate to good - moderate cover, shallow water but some nice big pools, a few side channels |
| R4 | meandering large channel with moderate to high vegetated bars, swirling flow, many failing banks dumping sweepers into channel, high lateral channel movement | *good to excellent | *good - more cover in side channels, some pools, abundant sweepers and some L.O.D. accumulations, low overhang veg. |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R5 | shallow riffle/run, fewer side channels, irregular meander, more larges | moderate to good - some areas have larger substrate | moderate to good - some areas are shallow riffle with less cover, other areas have some side channels, overhang veg. and L.O.D., few pools |
| R6 | main channel splits into 2 for one section, old abandoned channels in bush, mainly run | some sections have good potential for spawning | good - L.O.D. cover |
| R7 | wide slough, instream veg., mainly fines with a few embedded boulders, narrows into low gradient stream joining sloughs | limited in slough but some spawning possibilities in short stretches between sloughs | moderate to good - cover provided by deep water, instream veg., possibly undercut banks, submerged L.O.D. |
| R8 | small irregular channel, gravel/sand, riffle/run | *good to excellent - nice area near small lake in mid-reach and downstream of lower large lake | moderate to good - shallow water, cover from overhang veg., some pools and L.O.D. |
| R9 | Lower Manson Lake | | |
| R10 | irregular run, swirling flow, gravel/fines, some failing banks dumping L.O.D. | *excellent spawning in patches | moderate to good - some overhang veg. and sweepers, shallow water |
| R11 | Upper Manson Lake | | |
| R12 | very slow flow, tortuous meanders, channel sometimes splits into several channels, many side channels, abundant debris | nil | good to excellent - high debris provides good cover, veg. overhang, few pools |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R13 | several placer mine operations have deposited large amounts of gravel and changed stream course, largely riffle with some run, gravel/cobble, shallow flat creek, several settling ponds actively being used beside stream, much of the bed has been reworked for mining, several road crossings through stream | very limited, unlikely | low to moderate - shallow riffle, some cover but is limited |
| | McLeod River | | |
| R1 | meandering deep single channel, wide valley, high bank instability, debris accumulations cause channel avulsions, many small channels through trees | spawning habitat possible in patches, may be too fine (Ref. B caught ripe MW in side channel, suspected spawner; Ref. A reported spawning habitat for RB, GR and MW) | moderate cover from deep water debris acc., holding areas, several side channels, some undercut banks and veg. cover, deep runs |
| R2 | single confined channel, shallow riffle, shallow zone of small boulder cascades at top end | limited - possible in patches, substrate too large at top end | low accumulated sweepers and other L.O.D. provide cover, other areas have little cover, few holding areas, a few boulders and pools, shallow, no side channels |
| R3 | predominantly meandering run, some vegetated bars, occasional side channels, several failing banks dumping L.O.D., 4R is a barrier | one localized area looks very good, upstream from reach break, gravels may have accumulated behind old beaver dam | low to moderate - some L.O.D. cover, overhang veg. but very few pools so few holding areas |
| | McDougall River | | |
| R1 | meandering confined run, shallow, several failing banks | nil | low - very little cover, very shallow, few large boulders, no pools, low L.O.D. |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| **Mesilinka River** | | | |
| R1 | one main channel, several side channels, some unstable banks dumping L.O.D., clear water, large bars and occasionally islands, many large debris accumulations on bars, many logged valley slopes (possibly contributing the abundant L.O.D. | limited - possible spawning gravel on bars and in patches in side channels (Ref. A reported that the Mesilinka R. has high spawning and rearing potential) | good rearing habitat in flood and side channels, main channel provides low cover, pools, few boulders and L.O.D. |
| **Misinchinka River** | | | |
| R1 | meandering main channel with many turbid side/flood channels, several failing banks dumping L.O.D., some debris accumulations, many bars | low - possible in side channels, but main channel is too deep (Ref. A collected ripe MW in R1, found good spawning habitat; Ref. B reported spawning potential for RB and DV) | low cover, some accumulated debris creates a few pools, some veg. overhang |
| R2 | slow deep run, few pools but deep along banks, fine bed material, some failing slopes, very unstable banks, low debris is stable and embedded | nil (Ref. A reported MW and LSU spawn in R2/R3, although habitat is poor) | moderate to good - moderate cover in deep areas along bank, low debris, veg. overhang, good rearing in deeper water |
| R3 | tortuous meanders with many cut-offs and oxbows (some joined to channel), deep glide/slough, fine substrate, several failing banks dumping L.O.D., adjacent wetlands on valley flat | nil (Ref. A reported MW and LSU spawn in R2/R3 although habitat is poor) | *good - deep holding areas along bank, some embedded, stable L.O.D., veg. overhang provides good cover, several side channels, abandoned back channels and adjacent beaver wetlands and ponds provide good holding areas |
| R4 | shallow, meandering main channel, fines/gravel substrate, many mid-channel bars, low debris is accumulated but unstable | *some areas provide nice spawning gravel (Ref. A collected ripe MW in R4) | low to moderate - lower reach provides more cover, decreases in upper reach, some side channels, accumulations of unstable debris, few deep holding areas (few pools) |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R5 | two entrenched canyons (with cascades) at the beginning and end of the reach (2R2 may be a velocity barrier), middle section is less confined, riffle with more bars | nil | quite limited - fast water, little cover, some deep pools below cascades, large boulders |
| R6 | meandering main channel, several side channels, many bars, occasional slumping banks | very low | low - low cover, provided mainly by side channels, shallow with few pools |
| Mugaha Creek | | | |
| R1 | regular meandering channel, clear water, moderate debris, some clumps, occasional side channels, abundant side bars, failing banks, standing water in small wetlands | *excellent gravel (Ref. B suggested that high compaction of gravel may be a problem for spawning, despite appropriate size; Ref. A collected spent GR, RB and MW and ripe MW) | *good - nice pools behind debris accumulations, nice habitat, some veg. overhang, side channels |
| R2 | single confined straight channel, mainly run, few pools | low | low - low cover, few large boulders, few pools, some overhang veg. |
| R3 | confined single channel, low bars, slight meander, some debris | nice gravel substrate | moderate - shallow water, overhang veg. cover |
| R4 | very confined straight channel, some bedrock substrate (2R, 3R and velocity barrier impassable to fish) broken with small cascades | nil | very low - boulder cover only |
| R5 | meandering riffle/run, bars, few side channels, some straighter riffle sections | low | moderate - some areas have more cover, undercut banks and overhang veg., other sections are shallow riffle with less cover |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| Nabesche River | | | |
| R1 | riffle/run mix with a few small cascades, mod. flow, boulders/cobbles dominate, small zones of failing slopes deposit some bed material and small piles of debris | low - small pockets of large gravel suitable for large fish only (Ref. A caught spent GR, and indicated some spawning potential for GR in this reach) | moderate cover provided by large boulders and nice deep pools (very little debris, no side channels) |
| R2 | riffle with occasional deep pools and runs, moderate flow, zone of cascades and pools with 4R10 (a barrier) at top end of reach | low but perhaps some suitable pockets of large gravel (for large fish) (Ref. A caught ripe DV here, indicated DV (and possibly MW) spawn and rear in this reach; Ref. B indicated limited spawning potential, pockets of gravel behind large boulders, high compaction) | low cover, some boulders and a few nice large pools but much of reach is riffle with little cover |
| R3 | run, low gradient, less broken water, one large slope failure contributed significant debris and bed material, failing banks, new dirt road left bank looks unstable (will probably contribute fines at high flows) | some good areas for large fish (large gravel and small cobbles) | low instream cover, few large boulders, low L.O.D., mainly shallow run, more side channels at upper end with slower flows |
| R4 | increased gradient, riffle broken by cascades, some pools, bedrock with boulders and cobbles, stepped sills at lower end, all 1 m or less in height (cascades may be velocity barrier to some species) | unlikely but possible in a few pockets and one side channel | pools and boulders provide some holding areas, abundant tumbling white water |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R5 | very unstable meandering channel, slower flow, gravelly/small cobble bed, high channel movement across valley bottom | moderately good for large fish, substrate fairly large, not many riffles (Ref. B reports excellent spawning potential and good pool rearing habitat) | moderate - some nice pools, L.O.D. tends to be accumulated, channel changing course frequently, some undercut banks and many side channels |
| Unnamed Tributary to Nabesche River | | | |
| R1 | small creek in heavy timber, broken/rolling/tumbling, larges, very confined valley, failing slopes deposit L.O.D. and substrate, debris accumulation at top end of reach below small cascade may become a barrier, 10R10 just up from mouth is a barrier | unlikely spawning habitat, very limited | riffle with low cover, few pools, some boulders provide cover, many small cascades, fast flow |
| Nation River | | | |
| R1 | wide, rolling run with some broken flow, wide open stretches broken by several bedrock constrictions causing small cascades and rapids, some large mid-channel bars, islands and side bars | very low - may be limited spawning available in isolated pockets (Ref. A caught spent GR and ripe MW in R1, stated that MW spawn in river and possibly DY, GR and LM) | limited rearing - very low cover, largely from block material and deep water, limited side channels |
| R2 | straight, narrow, confined channel, bedrock in substrate and valley walls, large blocks in substrate, much of reach is placid, bedrock creates broken flow in places, tannin stained water, high algae | nil | low - limited cover available, some boulders and heavy algae in placid section, no pools or L.O.D. |
| R3 | shallow, wide channel, some large mid-channel and side gravel bars, no bedrock, frequently confined, rolling | unlikely, possibly very limited (in side channels) | very little cover, shallow, few boulders, low L.O.D., side channels may provide some rearing habitat |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R4 | entrenched bedrock canyon, river narrows to 10 m wide, placid flow, some very deep sections, 3 cascades and chutes at tight constrictions | nil - a 1.5R5 chute could be a velocity barrier to migration | good holding areas in deep placid bedrock controlled pools, elsewhere cover is very low, some block colluvium |
| R5 | sinuous/straight, wide channel, swirling/rolling with some broken flow, confined, very few pools and bars | very limited | low - very little cover, low veg. overhang, a few pools (deep) controlled by bedrock or boulders, very low debris |
| R6 | slow flow, placid/swirling, finer substrate, more bars, islands and side channels than R5, some failing banks, several wetlands are connected to main channel, channel often widens for islands and bars | some small areas of nice looking gravel (very localized) in upper reach adjacent to bars, observer noted they "almost looked like redds" | *moderate to very good - side channels around vegetated islands and associated wetlands provide good cover, more deep pools, fewer boulders, less riffle, very low debris |
| R7 | placid, wide deep river fringed by grass overhang opens up into shallow channel surrounded by extensive wetlands, high instream veg. and algae, tannin stained water, mud/sand bars and banks | low patches of gravel amongst predominantly fine substrate | *good cover provided by aquatic veg. and grassy banks, deep water, extensive ponds provide very good holding and rearing areas, many side channels |
| R8 | swirling/rolling/broken, more confined, increased gradient, several broken riffle sections (boulder/cobble) alternate with deep, placid, pooled areas (fines) | nil (possibly very limited) | less cover but more deep pools, very few side channels |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| Ole Creek | | | |
| R1 | small creek, heavily forested, mainly riffle, one short confined section with small cascades (no barriers) | nil | limited - some steep gradient sections with little cover, other areas provide more cover (boulder and vegetative cover) |
| Pack River | | | |
| R1 | reach is flooded at high water | (Ref. A collected ripe MW, LW and spent CSU in previous reach, suitable spawning gravel) | |
| R2 | Tudyah Lake | | |
| R3 | deep slow river, fine substrate, many side and old abandoned channels, high turbidity, low brush fringe | nil | moderately good in many side and back channels but limited cover in main channel, high turbidity, deep water and fringe of veg. overhang |
| R4 | single channel, deep glide, slow flow, unstable banks dumping fines | limited - possibly in patches, may be too slow and too many fines | low to moderate - limited cover, no L.O.D., few boulders, fringe of veg. overhang |
| Pardonet Creek | | | |
| R1 | shallow, single channel in heavy timber, tumbling/ broken, small cascades, low debris, a few failing banks dumping fines and L.O.D., 40R30 is a barrier | nil (Ref. A indicated that this creek is used for spawning by DV and GR - collected spent Gr) | very little available, shallow water, partially exposed boulders, all large substrate |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| Pelly Creek | | | |
| R1 | moderately steep gradient, sinuous, broken/rolling, larges, entrenched in bedrock canyon, failing slopes, many small cascades but no barriers, some deep pools, lower section in Ingenika valley is a lower gradient run | very limited - small gravel pockets may be utilized in flatter stretches near pools and bars | low - low cover, low L.O.D., a few deep pools, largely boulder cover, shallow riffle |
| R2 | large braided channel, many side channels, high channel instability, unconfined, debris in large accumulations on bars, banks highly unstable | limited - mainly large substrate but possibly pockets of spawning gravel available, extensive channel instability | limited - rearing in side channels but little in-stream cover, debris accumulations on bars |
| R3 | single, generally straight channel, rolling/broken, run and riffle, shallow | extremely limited and highly unlikely - may be small patches available to large fish | very little cover and few side channels, boulder and over veg. cover, shallow |
| R4 | flatter gradient, sinuous run, some bars and side channels | limited - some pockets of gravel for large fish | low to moderate - variable cover, some side channels, veg. overhang, undercut banks and low L.O.D., few holding areas, very few deep pools |
| R5 | tortuous meanders with several side channels and bars, high bank instability | moderate spawning potential | moderate rearing potential - cover provided in numerous side channels, L.O.D. along banks, undercut areas and some pools, accessible wetlands |
| R6 | variable reach generally sinuous, single channel, localized areas of meanders and high side channels, run with pools, substrate size and confinement varies | low to moderate - small meandering sections offer nice spawning gravel and good cover but are very patchy, most of reach has predominantly large substrate | low to moderate - some areas of deep pools and side channels, some boulder cover, low L.O.D., more cover in meandering section |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R7 | regular to tortuous meanders through fen wetland with several bars and high bank instability, run/pool | *very good spawning habitat although some bank instability (50%, mainly fines) | *very good rearing - moderate cover from L.O.D., pools and undercut banks, low holding areas |
| R8 | sinuous shallow riffle | unlikely - substrate too large | low - very little cover, shallow riffle, predominantly boulder cover, no holding areas |
| Pesika Creek | | | |
| R1 | large meanders on fan, several side channels and bars | *excellent spawning gravel | good - mixture of pools/run/riffle, moderate cover in pools and side channels |
| R2 | single narrow channel, confined and entrenched, riffle/pool, boulders, some small cascades (not barriers), bedrock canyons with small constrictions, low debris, a few failing slopes | nil - many small cascades but no barriers | low - very little cover, higher gradient, no side channels, some nice deep pools |
| R3 | meandering channel, some bars, unstable banks dumping debris and fine material | very low (unlikely) - substrate too large | moderate - some cover, overhang veg., pools and low L.O.D. |
| R4 | tortuous meanders, numerous bars and side channels, small debris accumulations on bars, several failing banks dumping fines and L.O.D., old oxbows and relic channels | *excellent spawning gravel | *very good - side channels, L.O.D., deep pools, overhang veg. provide good cover and holding areas |
| R5 | confined sinuous section, small canyon, few bars, no side channels | nil | low to moderate - undercut banks with overhang veg. provide cover |
| R6 | variable section, meanders with bars and a straight riffle/run stretch and canyon | nil | low to moderate |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R7 | tortuous meanders, numerous side channels and bars, debris accumulations on bars, high lateral channel movement | moderate to possible in side channels | *excellent rearing in back channels, cover and holding areas in pools |
| R8 | entrenched channel in bedrock canyon, several cascades, 3R3 is probably a velocity barrier | nil | very limited - probably only used for passage, if possible |
| R9 | meandering channel, few bars and side channels, mainly riffle, few pools, a few failing slopes dumping fines and L.O.D. | nil | low - limited cover and holding areas |
| R10 | meandering channel, bars and side channels, debris accumulations | limited - generally large substrate, but some pockets of gravel may be available, nice spawning gravel above upper trib., just before end of survey | low to moderate - side channels, some pools and L.O.D. for cover |
| | Unnamed Tributary to Pesika Creek | | |
| R1 | meandering, bars, side channels, frequent debris accumulations and failing banks, dumping L.O.D. and fines | unlikely - clear water but substrate too large | low to moderate - L.O.D., side channels and some veg. overhang |
| R2 | steep gradient, broken/ tumbling, confined, no side channels or bars, large substrate, avalanche slopes | nil | very limited - little cover |
| R3 | cascades over large blocks and bedrock, tumbling, narrow, no bars or side channels | nil | very limited - boulder cover only |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| Philip Creek | | | |
| R1 | meandering confined main channel, moderate bars, many slumping banks and valley walls, some L.O.D., rolling/ broken flow, a few open areas with high bars and side channels, major debris accumulations and badly eroded banks immediately below clearcut (right slope, near R2 break) | unlikely - limited to areas with high bars and side channels (if utilized at all | low to moderate - main channel has limited cover but a few back channels provide good rearing habitat |
| R2 | meandering main channel with frequent large side channels around vegetated islands, some short sections with one main confined channel, one very large debris accumulation has caused extensive flooding, many trees killed, abundant bars, many trees sloughing into channel from failing banks | *good - nice pockets of gravel suitable for spawning | *excellent - many side channels with abundant cover, undercut banks and overhang veg., frequent debris accumulations (some are controlling pools) |
| R3 | tortuous meanders through wetlands and forest, some cut-offs and oxbows, low, very unstable banks dumping abundant L.O.D. (sweepers), fines with some gravel pockets | low to moderate - some gravel patches, other areas are too fine | *excellent - abundant cover, high L.O.D., often accumulated, undercut banks, overhang veg., pools |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R4 | very tortuous meanders, 1, 2 or 3 main channels through wetlands, several small lakes connected to creek, all fines except through short forested gravel/fine sections, logged area and abundant beaver activity in upper reach | nil to low - a few small sections with gravels | *excellent - good cover and holding areas |
| Point Creek | | | |
| R1 | single channel, shallow, broken/tumbling, boulders, some unstable slumping banks | nil (Ref. A indicates some spawning habitat available, caught spent GR) | boulder cover |
| R2 | flatter gradient, more gravels, some debris accumulations and resulting avulsions | very limited to rare patches | limited to boulder cover |
| Police Creek | | | |
| R1 | small sinuous creek, choked with dead trees falling into channel from failing banks, fine substrate | nil | low to moderate - very high L.O.D. |
| Russel Creek | | | |
| R1 | meandering shallow stream, very unstable banks with high lateral channel movement, several bars and small debris accumulations | *good - several areas with good gravel, particularly in side channels | low to moderate - limited cover and few deep pools, cover from low L.O.D., boulders and some undercut banks |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| Schooler Creek | | | |
| R1 | rolling/broken riffle, steep sections have small cascades over boulders, short lower gradient sections have more gravels | very limited - only a few isolated gravel patches available (Ref. A collected ripe and spent RB and spent GR, suggested creek probably used by RB, DV and GR for spawning) | low - limited cover provided by boulders and veg. overhang |
| R2 | broken flow, boulder riffle sections alternate with slow cobble/gravel runs | limited - a few stretches of possible large spawning gravel | moderate cover, high channel cover and many boulders |
| Scott Creek | | | |
| R1 | confined single channel, broken flow, unstable banks, blocky boulders, silty coloured water, 2 rock falls in first canyon (2R4 and 1R3) do not appear to be barriers to fish although 1R3 is high velocity but has deep pools, second canyon has several small cascades (1 m or less) | nil | low - largely boulder cover |
| R2 | meandering channel with several side channels and bars, less confined, clear water, rolling run with a few pools on bends | very limited - may be possible in isolated pockets | moderately good - some debris, a few undercut banks, low overhang veg., a few pools and some side channels |
| R3 | single channel, broken flow, riffle, irregular meander, 2 slides deposit gravel into creek, 1 bank failure created a large debris accumulation | low - may be some pockets available | low to moderate - low cover, some L.O.D., a few pools, one large debris accumulation |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| Scovil Creek | | | |
| R1 | small shallow creek with several beaver dams and wetland areas, heavily forested with high vegetative channel cover, 5R10 is a barrier to migration | nil (or very limited) | low to moderate - some shallow sections, ponds provide deep holding areas, heavy veg. overhang cover |
| R2 | meandering run/riffle, flatter gradient, gravels/larges, opens up periodically with fewer beaver dams | low - may be some localized pockets appropriate for spawning | low to moderate - some L.O.D. cover and high veg. overhang, few boulders |
| R3 | narrow main channel, slow flow, largely a wetland area caused by beaver dam flooding, many side channels | nil (or very limited) | high cover from veg. overhang and side channels, many holding areas |
| Selwyn Creek | | | |
| R1 | straight/sinuous channel, tumbling/broken flow, larges, low debris, many small cascades, confined valley | nil (Ref. A caught spent GR but was probably in present draw-down zone) | very low - boulder cover only |
| Six Mile Creek | | | |
| R1 | meandering single channel, broken flow, small canyon near mouth, no obstructions, occasional failing banks dumping fines and trees into channel | nil (Ref. A collected ripe and spent GR at lower end) | low - shallow riffle, few pools and holding areas, low cover, some boulders and anchored L.O.D. (stepped), few side channels |
| R2 | regular and tortuous meanders, lower gradient, more bars, meander bends contacting valley wall and dumping sediment into channel | limited - some patchy gravel sections on bends | moderate - some pools, anchored L.O.D., some channel cover and several side channels provide cover |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R3 | zone of wetland swamps, beaver ponds and beaver dams | nil | moderate to good - appears to provide good rearing and holding areas if dams are not barriers (did not survey beyond lower end) |
| Stelkuz Creek | | | |
| R1 | single sinuous channel near lake, swamp wetland at lower end, multi-channelled with debris accumulations | moderate potential near lake, fine/ gravel mix | moderate rearing for small fish, some cover from veg. cover and debris |
| R2 | Stelkuz Lake | | |
| R3 | tortuous meanders, stable sunken debris, run/pool, moderate turbidity, unstable banks | nil - 100% fines | *excellent rearing habitat, 50% pools, high undercut banks, moderate debris |
| R4 | sinuous/meandering, riffle/ run, single channel, gravel/ fine mix | *good potential for spawning | moderate with limited cover and holding areas, shallow, undercut banks and boulders provide cover |
| R5 | regular/tortuous meanders, fines, some small beaver dams | nil | *nice rearing habitat, good deep pools, L.O.D. and undercut banks provide good cover |
| R6 | regular meanders with many side bars and side channels, some lateral channel movement and bank instability | *moderate to good - substrate may be too fine in places but is good overall | *very good rearing, nice pools, debris, and undercut banks with grassy overhang |
| R7 | irregular meander through grass wetland, fines, deep glide/pool | nil | *good rearing - cover provided by undercut banks, overhang veg. and deep water |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| Strandberg Creek | | | |
| R1 | irregular small creek in heavy timber, gravels/fines, unstable banks, very high stable debris, swirling slow flow, channel splits occasionally into several channels through forest, several old channels | low - pockets of gravel accumulating in spots | *excellent - abundant cover from debris, unstable banks, overhang veg. cover moderate, pool habitat created by debris |
| R2 | slightly greater gradient, less debris but still abundant | low (Ref. A collected spent GR and RB and ripe LSU in R2, they found LSD and GR eggs in the creek) | good |
| R3 | sinuous channel sometimes splits due to heavy debris accumulations, riffle/run | *nice spawning areas | moderate to good - L.O.D. and overhang veg. cover, few pools |
| R4 | mainly run with some riffle, one to several channels meandering, riffle/pool, high debris, heavy timber | moderate - some patches available | good - good cover provided by stable debris |
| Swannell River | | | |
| R1 | nice meandering stream, several side channels, bars, many moderate size debris accumulations, frequent failing banks | moderate to good | *very good rearing habitat - nice pools under abundant stable debris clumps, undercut banks (some failing), and overhang veg., numerous good side channels |
| R2 | sinuous/meandering channel, few pools, decreased bars and side channels, many debris accumulations, unstable banks, lateral channel movement | moderate | moderate to good - less cover and holding areas than R1, fewer pools and side channels but debris accumulations, undercut banks and side channels are common |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R3 | reach begins with a short canyon section with small cascades and bedrock walls, a few pools, other sections are run/riffle, no side channels, few bars, several failing slopes | very limited | low to moderate - few holding areas, limited cover |
| R4 | sinuous/meandering main channel, frequent side channels and abundant bars, abundant debris, possibly from an old burn site, some straight sections with low bars | low (difficult to determine substrate size) | moderate - some areas have high debris accumulations with several side channels and good cover, other areas (runs) provide little cover |
| R5 | straighter channel, bar formation in lower reach, mainly run/riffle, few pools | very limited (possible only in meandering sections at lower end) | low to moderate - cover limited in straight channels, more cover available in meanders and side channels. |
| Teare Creek | | | |
| R1 | small creek, heavily overgrown, abundant debris at lower end with several channels through forest, riffle, large substrate | nil | moderate - heavy vegetative cover and some boulders, mainly riffle |
| Tony Creek | | | |
| R1 | meandering single channel, several bars, abundant debris, mainly run, nice habitat, some back channels | *excellent spawning gravel | *good - abundant L.O.D. cover, overhang veg., some undercut banks and pools |
| R2 | meandering, more confined valley, pool/riffle, nice habitat, abundant debris | *very good (Ref. A collected ripe GR and RB in this reach) | *good - moderate L.O.D. provides cover, overhang veg. |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R3 | straight confined channel, small canyon, broken flow with several small cascades over bedrock ridges | nil | low - low cover, boulders, a few bedrock controlled pools |
| R4 | meandering main channel, occasional side channels, low L.O.D., shallow riffle/run | very low - may be isolated pockets in occasional side channels | low - low cover, boulders, some undercut banks, L.O.D. and few pools, shallow water |
| R5 | meandering channel, more bars, wider valley, back channels and associated wetlands, increased L.O.D. from failing banks | *moderately good | *good - nice rearing in back channels, nice small pools at bends under L.O.D., some veg. overhang |
| R6 | confined, canyon section with several cascades (2R is probably a barrier) tumbling/ broken flow | nil | very low - limited cover only, provided by boulders and associated small pools |
| | Tsedeka Creek | | |
| R1 | meandering run, accumulated debris from failing banks or bends | *nice areas for spawning, good gravel, clear water | moderate - some veg. cover, few pools, some accumulated debris provides cover |
| | Unnamed Tributary to Tsedeka Creek | | |
| R1 | low gradient, slow flow, many beaver dams and ponds creating wetlands and several channels | very limited - some gravel patches between beaver ponds, dams do not appear to be barriers to migration | *nice rearing and holding, abundant cover in deep water, undercut banks and overhang veg., good holding areas |
| | West Nabesche River | | |
| R1 | rock chute/cascade zone at mouth, velocity barrier, flattens out to riffle, cobbles/boulders, very uniform character, no pools | nil | low cover, veg. overhang 10% of channel, a few boulders |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R2 | lower gradient, larges, avalanche slopes push channel over and create gravel bars and L.O.D. accumulations, forms some pools and decreases velocity | substrate generally too large, possible limited spawning at disturbed spots with gravel deposits and bar formation | low cover provided by undercut banks and overhang veg., small boulders |
| Weston Creek | | | |
| R1 | irregular meander becomes tortuous, abundant debris, some is embedded, high silting from current logging activity, some old channels | *very good - excellent gravel (Ref. A caught spent and ripe GR and ripe LSU, found GR eggs in R1 and R2, reported creek is heavily utilized by all spring spawners) | *very good, nice pools caused by debris accumulations, some undercut banks, nice mix of pools/run |
| R2 | irregular channel, some sections more confined, bars, abundant debris, old relic channels, riffle, failing banks | low (Ref. A caught spent RB in this reach) | moderate - debris forms pools, limited cover |
| R3 | meandering riffle, some bars, valley narrows, boulders | very limited | low - low cover, few pools, less L.O.D., low veg. overhang |
| Wicked River | | | |
| R1 | sinuous channel, 4 falls at mouth (3R2, 2R, 3R10, 5R) are a fish barrier, large school of fish observed schooling at mouth downstream of falls, broken flow, large boulders | nil | low - limited cover in broken water provided by large boulders and associated small pools |
| R2 | broken/rolling flow, smaller boulders, several avalanche tracks push channel around and deposit colluvium, clear water, a few small localized areas with side channels and occasional small wetlands | nil for lower reach, may be isolated pockets available in upper reach | low - very low cover since boulders are smaller, occasional pools and deeper areas on bends, low L.O.D., very few side channels |

| | Description | Spawning Habitat | Rearing Habitat |
|---|---|---|---|
| R3 | rolling/broken run, several side channels, back channels and islands, reddish substrate from small trib., a few small wetland areas and beaver dams downstream of short dry section just below the lake | low - unlikely but may be gravel pockets available | low - more side channels but shallow water with little cover |
| R4 | Wicked Lake | | |
| R5 | slow flow through wetland area with ponds, fines, beaver activity | nil | moderate - cover provided by instream veg. and deeper water, L.O.D. |
| R6 | meandering, several channels across valley floor, extensive L.O.D., channel is almost dry at top end | *nice size spawning gravel before reach goes dry (very short reach) | moderate to good - abundant L.O.D. cover and pools |
| Unnamed Creek (between Scovil Creek and Lignite Creek) | | | |
| R1 | small volume creek, heavy vegetative cover, beaver dams and ponds | nil | some holding areas and deep water cover provided by ponds, some L.O.D. cover instream |

Ref. A: Bruce P.G. and P.J. Starr. 1985. Fisheries Resources and Fisheries Potential of Williston Reservoir and its Tributary Streams. Vol. II, Fisheries Technical Circular No. 69, B.C. Ministry of Environment. Note: Field study was conducted in 1975.

Ref. B: Aquatic Biophysical Survey, Recreational Fisheries Branch, Ministry of Environment, 1977/78/81.

Note: All observations were made from aerial video tapes, unless otherwise indicated. Fish presence information is referenced on reach cards.